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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, MERILYN P

ART UNIT	PAPER NUMBER
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2163

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/888,166

Applicant(s)

LIN ET AL.

Examiner

Merilyn P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> . |

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DETAILED ACTION

1. In response to the communication dated 01/23/2006, claims 1-27 are active in this office action.

Acknowledges

2. Receipt is acknowledged of the following items from the Applicant:
 - o The applicant's amendments to title and the claims have been considered and made of record.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 11 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The amendment to the claims has introduced a new term: "real time equipment status". Nowhere in the original specification describes or supports "sending a real time equipment status". In the interest of compact prosecution, since there is nowhere in the

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specification introduce or describe about real time equipment status, thus has no patentable weight.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 6, 9, 14, 19 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1 and 14 recites the broad recitation "determining if the file transactions indicate a change in the non-relational database", and the claim also recites "if the file transactions indicate a change in the non-relational database, sending the file transactions from the at least one data replication server to at least one relational database" which is the narrower statement of the range/limitation. Claims 6 and 19 recite the

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broad recitation “determining if a record type of the next transaction record is one of delete, put, and update” and the claim also recites “determining from the configuration file if the next transaction record is to be at least one of deleted, put, and updated in the relational database” which is the narrower statement of the range/limitation.

Regarding claims 1, 6, 14 and 19, these claim are indefinite in that it fails to point out what is included or excluded by the claim language. The term “if” in claim 1, 6, 14 and 19 is a relative term which renders the claim indefinite. The term “if” does not provide a standard for ascertaining the requisite degree.

Regarding claims 1 and 14, the term “responsive” renders the claims indefinite as to what response level the claim recited.

Regarding claims 9 and 22, the claims recites, “at least one relational database generates at least one real time report”. The claim is uncompleted as to database is a place to store data thus database cannot perform generating function.

Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, and due to the incomplete relationship between limitations, the claims have been treated on their merits as best understood by the examiner.

The Applicant is responsible for fixing all other 112 problems if it exists in the claims beside those that the Examiner addressed above.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1 and 14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claimed invention (Claims 1 and 4) recites method of data replication by polling a transaction log file of a non-relational database, reading file transaction and determining if the file transaction indicate a change in the non-relational database and sending the file transactions to at least one relational database which do not provide tangible results. The claims recite sending the file transaction from at least one data replication server to at least one relational database without any outcome result suggesting what is the whole purpose of data replication. To make the claims statutory, it's suggested that the claim should comprise the limitation of wherein the file transactions of the non-relational database sent to the at least one relational database is accessible in real time.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 2, 4, 7-12, 14-15, 17, 20-24 and 26-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin (US 6,029,178).

Regarding claim 1, Martin discloses a computer-based method of data replication of data in a programmable computer system (See col. 5, lines 10-66) comprising the steps of:

- polling a transaction log file (See col. 12, lines 6-16) of a non-relational database (“non-relational source database”, col. 15, lines 3-5) of a proprietary system (Fig. 7 or 8) at a time interval (“scheduled”, See col. 17, lines 43-58) for file transactions of the non-relational database (“Change data is applied to a source database...captures the change data...stores...EDM log”, See col. 18, lines 10-30) by at least one data replication server not running the non-relational database (EDM server 804A, Fig. 26);
- responsive to detecting file transactions of the non-relational database, reading the file transactions by the at least one data replication server and determining if the file transactions indicate a change in the non-relational database (See col. 12, lines 33-44, and col. 18, lines 31-35, and col. 19, lines 38-49); and
- if the file transactions indicate a change in the non-relational database, sending the file transactions from the at least one data replication server to at least one relational database (See col. 12, lines 54-65, col. 15, lines 2-24, col. 18, lines 31-35 and col. 19, lines 62-66).

Regarding claims 2 and 15, Martin discloses wherein the file transactions sent from the at least one data replication server to the at least one relational database are sent via respective

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relational database connections utilizing a relational database access protocol (See col. 15, lines 57-60).

Regarding claims 4 and 17, Martin discloses wherein the reading step comprises:

- retrieving a configure file indicating from which table of the non-relational database is data to be replicated and to which of the at least one relational database is data to be replicated (See col. 15, lines 25-31);
- initializing a configure value (See col. 15, lines 33-42); and
- connecting to the at least one relational database (See col. 15, lines 33-42).

Regarding claims 7, 20 and 27, Martin discloses more than one of the at least one data replication server update one of the at least one relational database at a same time (See col. 12, lines 53-54, and col. 19, line 62 to col. 20, line 3).

Regarding claims 8 and 21, Martin discloses wherein the at least one relational database is accessible using an end user query tool (See col. 15, lines 33-35).

Regarding claims 9 and 22, Martin discloses wherein the at least one relational database generates at least one real time report (See col. 29, lines 26-35).

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Regarding claims 10 and 23, Martin discloses wherein reading step is performed using at least one data extraction function of the proprietary system (Extract block 202, Fig. 2 and corresponding text).

Regarding claims 11 and 26, Martin discloses sending a real time equipment status from the at least one data replication server to the at least one relational database (See col. 23, lines 46-60).

Regarding claims 12 and 24, Martin discloses change in the non-relational database comprises a change in a field of a table of the non-relational database (See col. 10, lines 30-43).

Regarding claim 14, Martin/Dingman discloses a data processing computer-based system (See Figs. 1-4 and Figs. 12-13) having polling means, reading means and sending means for polling, reading and sending steps of claims 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 6,029,178), in view of Applicant's Admitted Prior Art.

Regarding claims 3 and 16, discloses all the claim subject matter as set forth above in claims 1 and 14. However, Martin is silent as to the at least one relational database being relational database selected from the group consisting of: an Engineer Data Analysis (EDA) relational database, and a Manufacture Execution System (MES) relational database. Applicant admits that an EDA relational database, a MES relational database was known at the time the invention was made. Since an Engineer Data Analysis (EDA) relational database, and a Manufacture Execution System (MES) relational database was readily available, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the well known EDA relational database, MES relational database as disclosed by Applicant's Admitted Prior Art as the relational database of Martin. The resultant use of the EDA relational database, the MES relational database would have performed the intended (by Martin) function, without undue experimentation and with expected and obvious result (See applicant's specification, page 8, last paragraph, line 6 to page 9, "the relational database connections 26...respectively").

8. Claims 5, 6, 13, 18, 19 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 6,029,178), in view of Draper (US 6,192,365).

Regarding claims 5 and 18, Martin discloses all the claimed subject matter as set forth above and further teaches opening the transaction log file (See col. 19, lines 38-49, Martin et al.). However, Martin is silent as to retrieving a last applied transaction log sequence number from a

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last update file and locating a last applied record based on the last applied transaction log sequence number. On the other hand, Draper teaches retrieving a last applied transaction log sequence number from a last update file and locating a last applied record based on the last applied transaction log sequence number (See col. 37, lines 13-22, Draper et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include transaction log sequence number into the system of Martin and locating a last applied record based on the last applied transaction log sequence number as taught by Draper. The motivation would have been to enable to restore prior versions of data using log sequence number.

Regarding claims 6 and 19, Martin/Draper discloses wherein determining step comprises:

- retrieving a next transaction record;
- determining if a record type of the next transaction record is one of a delete, put, and update; and
- determining from the configure file if the next transaction record is to be at least one of deleted, put, and updated in the at least one relational database.

See col. 9, lines 29-40 and col. 10, lines 35-36, Martin et al.

Regarding claims 13 and 25, Martin/Draper discloses wherein the determining step further comprises writing the transaction log sequence number to the last update file (See col. 37, lines 13-22, Draper et al.).

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Response to Arguments

9. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Merilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the

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organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MN

MN

March 30, 2006

Frantz Coby
FRANTZ COBY
PRIMARY EXAMINER